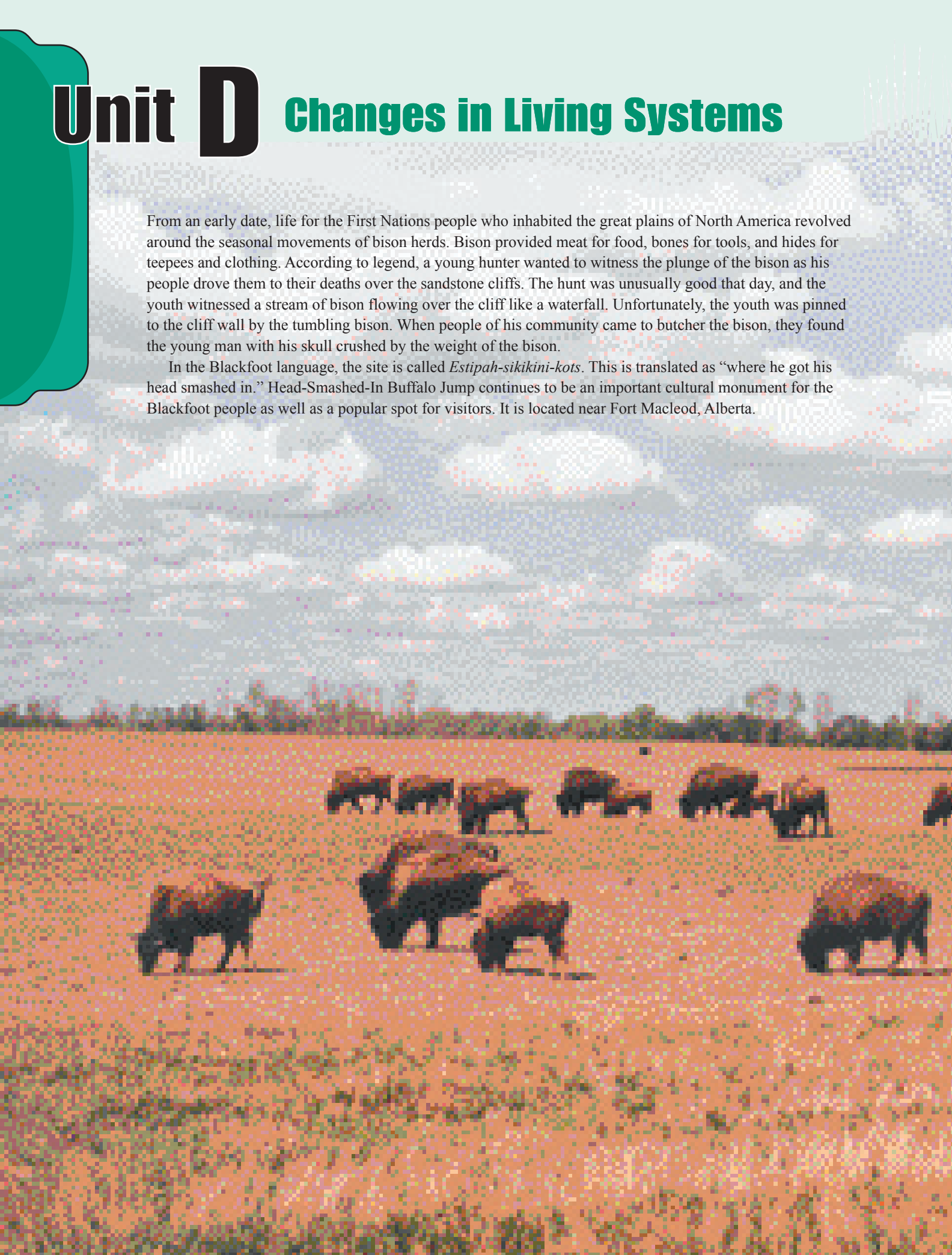
Unit D Changes in Living Systems

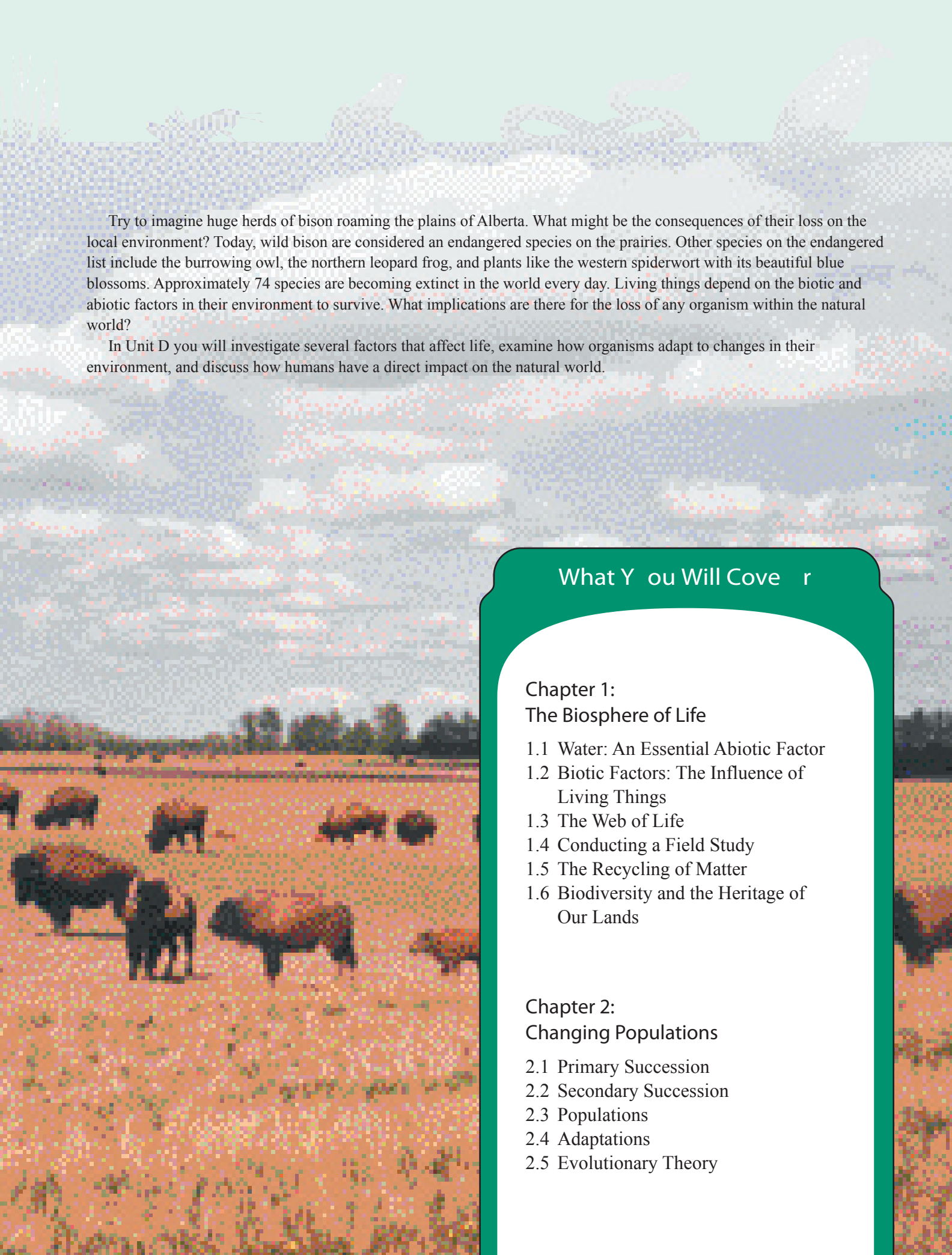
From an early date, life for the First Nations people who inhabited the great plains of North America revolved around the seasonal movements of bison herds. Bison provided meat for food, bones for tools, and hides for teepees and clothing. According to legend, a young hunter wanted to witness the plunge of the bison as his people drove them to their deaths over the sandstone cliffs. The hunt was unusually good that day, and the youth witnessed a stream of bison flowing over the cliff like a waterfall. Unfortunately, the youth was pinned to the cliff wall by the tumbling bison. When people of his community came to butcher the bison, they found the young man with his skull crushed by the weight of the bison.

In the Blackfoot language, the site is called *Estipah-sikikini-kots*. This is translated as "where he got his head smashed in." Head-Smashed-In Buffalo Jump continues to be an important cultural monument for the Blackfoot people as well as a popular spot for visitors. It is located near Fort Macleod, Alberta.



Try to imagine huge herds of bison roaming the plains of Alberta. What might be the consequences of their loss on the local environment? Today, wild bison are considered an endangered species on the prairies. Other species on the endangered list include the burrowing owl, the northern leopard frog, and plants like the western spiderwort with its beautiful blue blossoms. Approximately 74 species are becoming extinct in the world every day. Living things depend on the biotic and abiotic factors in their environment to survive. What implications are there for the loss of any organism within the natural world?

In Unit D you will investigate several factors that affect life, examine how organisms adapt to changes in their environment, and discuss how humans have a direct impact on the natural world.



What You Will Cover

Chapter 1: The Biosphere of Life

1.1 Water: An Essential Abiotic Factor
1.2 Biotic Factors: The Influence of Living Things
1.3 The Web of Life
1.4 Conducting a Field Study
1.5 The Recycling of Matter
1.6 Biodiversity and the Heritage of Our Lands

Chapter 2: Changing Populations

2.1 Primary Succession
2.2 Secondary Succession
2.3 Populations
2.4 Adaptations
2.5 Evolutionary Theory